

REMARKS

This Amendment is responsive to the Office Action mailed September 22, 2009, which has been carefully considered. Claims 37, 39-62 and 66-68 are pending, with claim 52 withdrawn from consideration. Thus, at the time of the Office Action, claims 37, 39-51, 53-62 and 66-68 were presented for examination. Claims 37, 66, 67 and 68 are of independent form.

With this Amendment, claim 68 has been amended. Support for the amended claim is found in the originally filed application, particularly at locations identified hereinafter. Accordingly, no new matter has been added.

Reconsideration and allowance of the subject application are respectfully requested for at least the following reasons.

35 U.S.C. § 103 Rejection

Claims 37, 39-51, 53-62 and 66-68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mulier et al., U.S. Patent No. 6,096,037 ("Mulier"), in view of Huitema et al., U.S. Patent No. 5,562,702 ("Huitema"), and further in view of Eggers et al., U.S. Patent No. 6,032,674 ("Eggers").

In raising the rejection, the Office Action provides as follows:

"Mulier et al disclose a device for clamping and treating electrodes, and specifically teach that providing an electrolytic solution from fluid outlets in the jaws will enhance the delivery of energy to tissue. Figures 4 and 5 show the electrode in the jaw member, the electrode having a plurality of fluid outlets for delivering fluid to tissue. Mulier et al fail to specifically disclose a dimensional change sensor for measuring tissue thickness.

Huitema et al disclose another forceps device, and specifically teach that it is known to include sensors in forceps jaws for measuring tissue thickness (col. 9, lines 48-51). The Huitema et al forceps device may also include energy delivery means for treating tissue. Huitema et al fail to specifically disclose the type and placement of the thickness measuring sensor.

Eggers et al also disclose a dimensional change sensor (310) which is an ultrasound sensor that detects a change in the thickness of tissue as it is being ablated. The sensor is used to control the output of RF energy and alerts the user of changing tissue thickness to prevent creating too deep a channel in tissue (col.

23, lines 50-63). The examiner maintains the device is inherently a “shrinkage sensor” since the channel created by the device is creating a shrinkage tissue area (i.e. channel) that is being detected by the sensor, and the sensor provides feedback regarding the shrinkage of the tissue (i.e. the depth of the channel).

To have provided the Mulier et al forceps device with a sensor for measuring tissue thickness would have been an obvious consideration for one of ordinary skill in the art, particularly since Huitema et al teach that it is known to provide such sensors on forceps devices. To have further provided a surface mounted sensor would have been an obvious design consideration since Eggers et al. fairly teach it is known to use such a surface mounted sensor to monitor tissue thickness.”

The Applicant respectfully disagrees with the rejection of the claims for at least the following reasons.

As indicated in the Applicant’s prior response, the ultrasonic transducer of Eggers is not understood to be configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue. Applicant believes that such a feature would be non-obvious in light of Eggers, particularly as Eggers is applied to a beating heart where grasping the tissue would appear undesirable. Furthermore, unlike the Applicant’s invention, Eggers does not appear to have the ability to provide the feature of the ultrasonic sensor itself being able to provide a measure of dimensional change without the aid of a sensing system. Applicant’s invention, on the other hand, does not require a sensing system to provide a measurement of dimensional change.

In the response to the foregoing argument, the Office Action provides the following:

“Applicant asserts on page 8 of the response that the Eggers ultrasonic transducer does not grasp tissue or move relative to tissue while having a grasp on tissue. The examiner maintains that it is not necessary for the Eggers reference to teach such a feature. Mulier and Huitema both disclose devices that grasp tissue, and Huitema specifically teaches that it is known to provide a tissue thickness sensor on a tissue grasping device. Eggers is merely used to teach a known type of tissue thickness sensor, and specifically one that may be used to feedback a signal to an energy generator to control the delivery of energy based on tissue thickness. The examiner maintains the Eggers sensor would inherently be capable of working on such a grasping device since it measures reflected signals to measure tissue thickness and since the opposing jaw would be easily distinguishable in such a reflected signal to readily define the tissue thickness.”

From the foregoing, the Office Action sets forth that “[a]pplicant asserts...the Eggers ultrasonic transducer does not grasp tissue or move relative to tissue while having a grasp on tissue. *The examiner maintains that it is not necessary for the Eggers reference to teach such a feature.*” (emphasis added) Furthermore, it is acknowledged in the Office Action that “Mulier et al fail to specifically disclose a dimensional change sensor for measuring tissue thickness”, and Huitema “fail to specifically disclose the type and placement of the thickness measuring sensor.”

Thus, from the foregoing understanding of the references as set forth in the Office Action, it appears that *none* of the references disclose “a dimensional change sensor configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue” as recited by independent claims 37, 66, 67 and 68.

The Office Action goes on to set forth that the reason it is not necessary for Eggers to teach a dimensional change sensor configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue as set forth by the independent claims is that “Mulier and Huitema both disclose devices that grasp tissue, and Huitema specifically teaches that it is known to provide a tissue thickness sensor on a tissue grasping device.”

The Applicant respectfully submits that, even assuming Mulier and Huitema both disclose devices that grasp tissue, and Huitema specifically teaches that it is known to provide a tissue thickness sensor on a tissue grasping device as set forth by the Office Action, the Examiner still has not set forth a rejection showing how either reference may teach “a dimensional change sensor configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue” as recited by the independent claims.

The Examiner appears to have merely shown a tissue thickness sensor from Huitema, but has not shown how such a sensor of Huitema is configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue as recited by the claims. Moreover, Applicant does not believe such a sensor would be inherent in Huitema given that the thickness of tissue may be determined ultrasonically without having a grasp of the tissue as appears to be taught by Eggers.

From the foregoing, the Examiner appears to have equated a tissue thickness sensor on a tissue grasping device of Huitema to the claim limitation of “a dimensional change sensor configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue” when, in fact, the cited art does not appear to fairly disclose such.

Moreover, to substitute Eggers ultrasonic sensor as applied to Huitema with the Applicant’s claimed dimensional change sensor would change the principle of operation of the prior art invention being modified, which is insufficient to rend the claims *prima facie* obvious. As provided by MPEP § 2143.01, “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to rend the claims *prima facie* obvious.” *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

Here, the principle of operation of Egger’s ultrasonic sensor is to provide a thickness of the tissue through ultrasonic feedback which, as shown from the drawings, is performed without being configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue. Applicant believes that use in such a manner is set forth given the potential for increase risk to a beating heart if the sensor where configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue. Thus, to modify Huitema in view of Eggers with a dimensional change sensor configured to grasp the tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue would clearly change the principle of operation of the prior art invention being modified, and contravene the rule of *In re Ratti*.

Quite simply, Eggers does not teach use of an ultrasonic sensor in a manner set forth by the claims. Even assuming Eggers ultrasonic sensor is “inherently capable of working on such a grasping device since it measures reflected signals to measure tissue thickness and since the opposing jaw would be easily distinguishable in such a reflected signal to readily define the tissue thickness” as set forth in the Office Action, the ultrasonic sensor itself must also be configured to grasp tissue and move relative to the dimensional change of the tissue while having a grasp of the tissue as recited by the claims, and not merely work on a grasping device.

Now, without acquiescing to the properness of the foregoing rejection, Applicant has amended claim 68 to expedite prosecution and further distinguish from the art. In particular, Applicant has amended claim 68 to recite a mechanical dimensional change sensor to further distinguish from an ultrasonic sensor. Support may be found, for example, in paragraph [0049] which, in combination with the drawings, explains the mechanical operation of the sensor.

Accordingly, the Applicant believes that it has been demonstrated that the claims herein define over the teachings of the cited references. In view of the foregoing remarks, it is respectfully submitted that independent claims 37, 66, 67 and 68 are patentable over the cited references, and the conditions of patentability have been satisfied. Allowance of claims 37, 66, 67 and 68, as well as the pending claims which depend directly or ultimately therefrom, is respectfully requested.

SUMMARY

The Applicant respectfully submits that, in light of the foregoing remarks, and having dealt with all the rejections raised by the Examiner, the claims are in order for allowance. Thus, early allowance is earnestly solicited

If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603.668.6560.

In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

Respectfully submitted,

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